

CALIFORNIA CODE OF REGULATIONS

TITLE 8. INDUSTRIAL RELATIONS

CHAPTER 4. DIVISION OF
INDUSTRIAL SAFETY

SUBCHAPTER 7.
GENERAL INDUSTRY SAFETY ORDERS

GROUP 20. FLAMMABLE LIQUIDS, GASES AND VAPORS

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Article 134. Definitions

5415. Definitions.

Adequate Ventilation. Ventilation which, under normal operating conditions, is sufficient to keep the concentration of a hazardous gas, vapor, mist, fume or dust below 25 percent of the lower explosive limit and sufficient to ensure that no employee is harmfully exposed.

Aerated Solid Powders. Any powdered material used as a coating material which shall be fluidized within a container by passing air uniformly from below. It is common practice to fluidize such materials to form a fluidized powder bed and then dip the part to be coated into the bed in a manner similar to that used in liquid dipping. Such beds are also used as sources for powder spray operations. The combustibility of such materials may be determined by reference to the "Standard for the Prevention of Dust Explosions in the Plastics Industry", NFPA No. 654—1982.

Aerosol. A material which is dispensed from its container as a mist, spray or foam by a propellant under pressure.

Atmospheric Tank. A storage tank which has been designed to operate at pressures from atmospheric through 0.5 psig.

Barrel. A volume of 42 U. S. gallons.

Boiling Point. The boiling point of a liquid at a pressure of 14.7 psia (760 mm). Where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, for purposes of this code the 10 percent point of a distillation performed in accordance with the Standard Method of Test for Distillation of Petroleum Products, ASTM D-86-78, may be used as the boiling point of the liquid.

Boil-Over. The expulsion of crude oil (or certain other liquids) from a burning tank. The light fractions of the crude oil burn off producing a heat wave in the residue, which on reaching a water strata may result in the expulsion of a portion of the contents of the tank in the form of froth.

Bulk Oxygen System. A bulk oxygen system is an assembly of equipment, such as oxygen storage containers, pressure regulators, safety devices, vaporizers, manifolds, and interconnecting piping; which has a storage capacity of more than 20,000 cubic feet of oxygen (NTP) including unconnected reserves on hand at the site. The bulk oxygen system terminates at the point where oxygen at service pressure first enters the supply line. The oxygen containers may be stationary or movable, and the oxygen may be stored as gas or liquid.

Bulk Plant. That portion of a property where flammable or combustible liquids are received by tank vessel, pipe lines, tank car, or tank vehicle, and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipe line, tank car, tank vehicle, or container.

Chemical Plant. A large integrated plant or that portion of such a plant other than a refinery or distillery where flammable or combustible liquids are produced by chemical reactions or used in chemical reactions.

Closed Container. A container as herein defined, so sealed by means of a lid or other device that neither liquid nor vapor will escape from it at ordinary temperatures.

Combustible Liquids. See Liquids.

Container. Any vessel of 60 U.S. gallons or less capacity used for transporting or storing flammable or combustible liquids.

Crude Petroleum. Hydrocarbon mixtures that have a flash point below 150°F. and which have not been processed in a refinery.

Dip Tank. A tank, vat or container of flammable or combustible liquid in which articles or materials are immersed for the purpose of coating, finishing, treating or similar processes.

Distillery. A plant or that portion of a plant where flammable or combustible liquids produced by fermentation are concentrated, and where the concentrated products may also be mixed, stored, or packaged.

Dry Spray Booth. A spray booth not equipped with a water washing system. A dry spray booth may be equipped with distribution or baffle plates to promote an even flow of air through the booth or cause deposit of overspray before it enters exhaust duct; or overspray dry filters to minimize dust or residues entering exhaust ducts; or overspray dry filter rolls designed to minimize dusts or residues entering exhaust ducts; or where dry powders are being sprayed, with powder collection systems so arranged in the exhaust to capture oversprayed material.

Electrostatic Fluidized Bed. A container holding powder coating material which is aerated from below so as to form an air-supported expanded cloud of such material which is electrically charged with a charge opposite to the charge of the object to be coated; such object is transported through the container immediately above the charged and aerated materials in order to be coated.

Fire Area. An area of a building separated from the remainder of the building by construction having a fire resistance of at least one hour and having all communicating openings properly protected by an assembly having a fire resistance rating of at least one hour.

Flammable Aerosol. An aerosol which is required to be labeled "Flammable" under the U. S. Federal Hazardous Substances Labeling Act. For the purposes of these regulations such aerosols are considered Class 1A liquids.

Flammable (Explosive) Limits. The percent levels, volume by volume, of a flammable vapor or gas mixed in air between which propagation of a flame or an explosion will occur upon the presence of ignition. The leanest mixture at which this will occur is called the lower flammable limit. The richest mixture at which it will occur is the upper flammable limit. The percent of vapor mixture between the lower and upper limits is known as the flammable range.

Flash Point (of a liquid). The minimum temperature at which it gives off vapor in sufficient concentration to form an ignitable mixture with air near the surface of the liquid within the vessel as specified by appropriate test procedure and apparatus as follows:

5159. Confined Space Operations.

(a) **Entry Into and Work Within Confined Spaces.** The requirements of this subsection apply to entry into and work within a confined space: whenever an atmosphere free of dangerous air contamination and/or oxygen deficiency cannot be ensured through the implementation of the applicable provisions of Section 5158, or whenever, due to the existence of an emergency, it is not feasible to ensure the removal of dangerous air contamination and/or an oxygen deficiency through the implementation of the applicable provisions of Section 5158.

(1) Tanks, vessels, or other confined spaces with side and top openings shall be entered from side openings when practicable.

NOTE: For the purposes of this Order, side openings are those within 3/4 feet of the bottom.

(2) Appropriate, approved respiratory protective equipment, in accordance with Section 5144, shall be provided and worn.

(3) An approved safety belt with an attached line shall be used. The free end of the line shall be secured outside the entry opening. The line shall be at least 1/4-inch diameter and 2,000-pounds test.

EXCEPTION: Where it can be shown that a safety belt and attached line would further endanger the life of the employee.

(4) At least one employee shall stand by on the outside of the confined space ready to give assistance in case of emergency. At least one additional employee who may have other duties shall be within sight or call of the standby employee(s).

(A) The standby employee shall have appropriate, approved, respiratory protective equipment, including an independent source of breathing air which conforms with Section 5144(e), available for immediate use.

(B) A standby employee (or employee's) protected as prescribed by Section 5159(a) (4) (A) may enter the confined space but only in case of emergency and only after alerting at least one additional employee outside of the confined space of the existence of an emergency and of the standby employee's intent to enter the confined space.

(5) When entry must be made through a top opening, the following requirements shall also apply:

(A) The safety belt shall be of the harness type that suspends a person in an upright position.

(B) A hoisting device or other effective means shall be provided for lifting employees out of the space.

(6) Work involving the use of flame, arc, spark, or other source of ignition is prohibited within a confined space (or any adjacent space having common walls, floor, or ceiling with the confined space) which contains, or is likely to develop, dangerous air contamination due to flammable and/or explosive substances.

(7) Whenever gases such as nitrogen are used to provide an inert atmosphere for preventing the ignition of flammable gases or vapors, no flame, arc, spark, or other source of ignition shall be permitted unless the oxygen concentration is maintained at less than 20 percent of the concentration which will support combustion.

(A) Testing of the oxygen content shall be conducted with sufficient frequency to ensure conformance with this paragraph.

(B) A written record of the results of such testing shall be made and kept at the work site for the duration of the work.

(C) Affected employees and/or their representative shall be provided an opportunity to review and record the testing results.

(8) Only approved lighting and electrical equipment, in accordance with the Low-Voltage Electrical Safety Orders, shall be used in confined spaces subject to dangerous air contamination by flammable and/or explosive substances.

(9) Employees working in confined spaces which have last contained substances corrosive to the skin or substances which can be absorbed through the skin shall be provided with, and shall be required to wear, appropriate personal protective clothing or devices in accordance with Article 10.

(b) **Precautions for Emergencies Involving Work in Confined Spaces.** (1) At least one person trained in first aid and cardiopulmonary resuscitation (CPR) shall be immediately available whenever the use of respiratory protective equipment is required by Section 5159(a). Standards for CPR training shall follow the principles of the American Heart Association or the American Red Cross.

(2) An effective means of communication between employees inside a confined space and a standby employee shall be provided and used whenever the provisions of Section 5159(a) require the use of respiratory protective equipment or whenever employees inside a confined space are out of sight of the standby employee(s). All affected employees shall be trained in the use of such communication system and the system shall be tested before each use to confirm its effective operation.

TITLE 8 GENERAL INDUSTRY SAFETY ORDERS

(Register 86, No. 51—12-29-86)

§ 5416

(p. 526.6.7)

Spray Room. A power-ventilated fully enclosed room used exclusively for open spraying of flammable or combustible materials. The entire spray room is a spray area. A spray booth is not a spray room.

Spraying Area. Any area in which dangerous quantities of flammable vapors or mists, or combustible residues, dusts or deposits are present due to the operation of spraying processes.

A spraying area shall include:

(A) The interior of spray booths except as specifically provided in Section 5456(d).

(B) The interior of ducts exhausting from spraying processes.

(C) Any area in the direct path of spray or any area containing dangerous quantities of air-suspended powder or air-suspended combustible residue, dust, deposits, vapor or mists as a result of spraying operations.

SUS. Saybolt Universal Seconds as determined by the Standard Method of Test for Saybolt Viscosity (ASTM D-88-81), and may be determined by use of the SUS conversion tables specified in ASTM Method D2161-66 following determination of viscosity in accordance with the procedures specified in the Standard Method of Test for Viscosity of Transparent and Opaque Liquids (ASTM D445-79).

Vapor Area. Any area containing dangerous quantities of flammable vapors in the vicinity of dip tanks, their drain boards or associated drying, conveying or other equipment, during operation or shutdown periods.

Vapor Pressure. The pressure, measured in pounds per square inch (absolute) exerted by a volatile liquid as determined by the "Standard Method of Test for Vapor Pressure of Petroleum Products (Reid Method)" (ASTM D323-82).

Viscous. A viscosity of 45 SUS or more.

Waterwash Spray Booth. A spray booth equipped with a water washing system designed to minimize dusts or residues entering exhaust ducts and to permit the recovery of overspray finishing material.

NOTE: Authority cited: Section 142.3, Labor Code. Reference Section 142.3, Labor Code.

HISTORY:

1. Amendment filed 7-13-78; effective thirtieth day thereafter (Register 78, No. 28). For prior history, see Register 76, No. 36.

2. Amendment filed 12-5-86; effective thirtieth day thereafter (Register 86, No. 51).

Article 135. General

5416. Flammable Vapors.

(a) Ventilation shall be sufficient so that under normal operating conditions concentrations of flammable vapors or gases in buildings, rooms or similarly enclosed places shall not exceed 25 percent of the lower explosive limit for such vapors except that in pits, sumps, or other locations which are not normally entered, except in cases of emergency, such ventilation will not be required. In such locations, the provisions of paragraph (c) shall be complied with.

(b) No source of ignition shall be permitted in or near a pit or sump in a location near which flammable liquids are regularly and frequently, or have recently been, used, handled or stored in other than closed containers unless tests have been made which indicate that the concentration of flammable vapor is less than 25 percent of the lower explosive limit.

5532. Design, Construction, and Capacity of Containers.

(a) Only approved containers and portable tanks shall be used. Metal containers and portable tanks meeting the requirements of and containing products authorized by Chapter 1, Title 49, of the Code of Federal Regulations (DOT Regulations), or NFPA No. 386, Standard for Portable Shipping Tanks, shall be deemed to be acceptable.

(b) Each portable tank shall be provided with one or more devices installed in the top with sufficient emergency venting capacity to limit internal pressure under fire exposure conditions to 10 psig, or 30 percent of the bursting pressure of the tank, whichever is greater. The total venting capacity shall be not less than that specified in Subsections 5593(d) or (f). At least one pressure-actuated vent having a minimum capacity of 6,000 cu. ft. of free air per hour (14.7 psia and 60°F.) shall be used. It shall be set to open at not less than 5 psig. If fusible vents are used, they shall be actuated by elements that operate at a temperature not exceeding 300°F. When used for paints, drying oils, and similar materials where plugging of the pressure-actuated vent may occur, fusible vents or vents of the type that soften to failure at a maximum of 300°F. under fire exposure, may be used for the entire emergency venting requirement.

(c) Containers and portable tanks for flammable and combustible liquids shall conform to Table FL-2.

EXCEPTIONS: (1) Medicines, beverages, foodstuffs, cosmetics, and other common consumer items, when packaged according to commonly accepted practices, shall be exempt from the requirements of 5532(a).

(2) Class IA and Class IB flammable liquids may be stored in glass containers of not more than one-gallon (3.78 l.) capacity if the required liquid purity (such as ACS analytical reagent grade or higher) would be affected by storage in metal containers or if the liquid would cause excessive corrosion of the metal container.

Container Type	Flammable Liquids			Combustible Liquids	
	Class IA	Class IB	Class IC	Class II	Class III
Glass.....	1 pt. (472 ml)	1 qt. (945 ml)	1 gal. (3.78 l)	1 gal. (3.78 l)	5 gal. (18.9 l)
Metal (Other than DOT Drums) or approved plastic.....	1 gal.	5 gal.	5 gal.	5 gal.	5 gal.
Safety Cans.....	2 gal.	5 gal.	5 gal.	5 gal.	5 gal.
Metal Drum (DOT Spec)	60 gal.	60 gal.	60 gal.	60 gal.	60 gal.
Approved Portable Tanks.....	660 gal.	660 gal.	660 gal.	660 gal.	660 gal.

NOTE: Authority and reference cited: Section 142.3, Labor Code.

HISTORY:

1. Editorial correction of subsection (c) (2) and Table FL-2 filed 12-9-82 (Register 82, No. 80).

(A) The flash point of a liquid having a viscosity less than 45 SUS at 100°F. (37.8°C) and a flash point below 200°F. (93.4°C), shall be determined in accordance with the Standard Method of Test for Flash Point by the Tag Closed Tester, ASTM D-56-79.

(B) The flash point of a liquid having a viscosity of 45 SUS or more at 100°F. (37.8°C) or a flash point of 200°F. (93.4°C) or higher shall be determined in accordance with the Standard Method of Test for Flash Point by the Pensky Martens Closed Tester, ASTM D-93-73.

(C) For a liquid that is a mixture of compounds that have different volatilities and flash points, its flash point shall be determined by using the procedure specified above on the liquid in the form it is shipped. If the flash point, as determined by this test, is 100°F. (37.8°C) or higher, an additional flash point determination shall be run on a sample of the liquid evaporated to 90 percent of its original volume, and the lower value of the two tests shall be considered the flash point of the material.

(D) Organic peroxides, which undergo autoaccelerating thermal decomposition, are excluded from any of the flash point determination methods above.

Flow Coat. The process of discharging liquids from nozzles, slots, etc., in an unatomized state onto material to be coated.

Fluidized Bed. A container holding powder coating material which is aerated from below so as to form an air-supported expanded cloud of such material through which the preheated object to be coated is immersed and transported.

Gaseous Hydrogen System. One in which the hydrogen is delivered, stored and discharged in the gaseous form to consumer's piping. The system includes stationary or movable containers, pressure regulators, safety relief devices, manifolds, interconnecting piping and controls. The system terminates at the point where hydrogen at service pressure first enters the consumer's distribution piping.

Ignition Temperature. The minimum temperature to which a flammable vapor or gas mixture in air must be heated in order to initiate or cause self sustained combustion.

Inside Storage. A room or building used for the storage of liquids in containers or portable tanks, separated from other types of occupancies. Such areas may include:

Inside Room. A room totally enclosed within a building and having no exterior walls.

Cut-off Room. A room within a building having at least one exterior wall.

Liquefied Hydrogen System. One into which liquefied hydrogen is delivered and stored and from which it is discharged in the liquid or gaseous form to consumer piping. The system may include stationary or portable containers, pressure regulators, safety relief devices, manifolds, interconnecting piping and controls as required. The system originates at the storage container fill connection and terminates at the point where hydrogen at service pressure first enters the supply line.

Liquid. Any material which has a fluidity greater than that of 300 penetration asphalt when tested in accordance with ASTM Test for Penetration for Bituminous Materials, D-5-73. When not otherwise identified, the term "liquid" shall include both flammable and combustible liquids.

Liquid, Combustible. A liquid having a flash point at or above 100°F. (37.8°C). They shall be subdivided as follows:

(A) Class II Liquids shall include those having flash points at or above 100°F. (37.8°C) and below 140°F. (60°C).

(B) Class IIIA Liquids shall include those having flash points at or above 140°F. (60°C) and below 200°F. (93.4°C).

(C) Class IIIB Liquids shall include those having flash points at or above 200°F. (93.4°C).

Liquid, Flammable. A liquid having a flash point below 100°F. (37.8°C) and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100°F. (37.8°C). It shall be known as a Class I liquid. Class I liquids shall be subdivided as follows:

(A) Class IA shall include those having flash points below 73°F. (22.8°C) and having a boiling point below 100°F. (37.8°C).

(B) Class IB shall include those having flash points below 73°F. (22.8°C) and having a boiling point at or above 100°F. (37.8°C).

(C) Class IC shall include those having flash points at or above 73°F. (22.8°C) and below 100°F. (37.8°C).

Liquid, Unstable (Reactive). A liquid which in the pure state or as commercially produced or transported will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shock, pressure, or temperature.

Low Pressure Tank. A storage tank designed to withstand an internal pressure above 0.5 psig but not more than 15 psig.

Outdoor Location. Outside of any building or structure, and includes locations under a weather shelter or canopy provided such locations are not enclosed by more than two walls set at right angles and are provided with vent space between the walls and vented roof or canopy.

Portable Tank. Any closed vessel having a liquid capacity over 60 U.S. gallons and not intended for fixed installation.

Pressure Vessel. Any fired or unfired vessel within the scope of the applicable section of the ASME Boiler and Pressure Vessel Code.

Refinery. A plant in which flammable or combustible liquids are produced on a commercial scale from crude petroleum, natural gasoline, or other hydrocarbon sources.

Roll Coating. The spreading and impregnating of fabrics, paper or other material by passing the material to be coated directly through a tank or trough containing flammable or combustible liquid, or over the surface of a roller that revolves partially submerged in a flammable liquid.

Safety Can. A listed container of not more than five gallons capacity, having a spring-closing lid, spout cover and a flame arrester and so designed that it will safely relieve internal pressure when subjected to fire exposure.

Service Station, Automotive. That portion of property where liquids used as motor fuels are stored and dispensed from fixed equipment into the fuel tanks of motor vehicles and shall include any facilities available for the sale and service of tires, batteries and accessories, and for minor automotive maintenance work. Major automotive repairs, painting, body and fender work are excluded.

Service Station, Marine. That portion of a property where flammable or combustible liquids used as fuels are stored and dispensed from fixed equipment on shore, piers, wharves, or floating docks into the fuel tanks of self-propelled craft, and shall include all facilities used in connection therewith.

Spray Booth. A power-ventilated structure provided to enclose or accommodate a spraying operation, to confine and limit the escape of spray, vapor and residue, and to safely conduct or direct them to an exhaust system. Spray booths are manufactured in a variety of forms, including automotive refinishing, downdraft, open-face, traveling, tunnel, and updraft booths.

5569. Piping, Valves and Fittings.

(a) The design, fabrication, assembly, test and inspection of the piping system shall be in accordance with Article 146 except that, where dispensing is from a floating structure, suitable lengths of oil-resistant flexible hose may be employed between the shore piping and the piping on the floating structure as made necessary by change in water level or shore line.

(1) Where excessive stray currents are encountered, piping handling Class I and Class II liquids at marine service stations shall be electrically insulated from the shore piping.

(2) Piping shall be located so as to be protected from physical damage.

(3) A readily accessible valve to shut off the supply from shore shall be provided in each pipeline at or near the approach to the pier and at the shore end of each marine pipeline adjacent to the point where a flexible hose is attached.

(4) After completion of the installation, including any paving, that section of the pressure piping system between the pump discharge and the connection for the dispensing facility shall be tested for at least 30 minutes at the maximum operating pressure of the system. Such tests shall be repeated at 5-year intervals thereafter.

5572. Emergency Power Cutoff. A clearly identified and easily accessible switch(es) or circuit breaker(s) shall be provided at a location remote from dispensing devices, including remote pumping systems, to shut off the power to all dispensing devices in the event of an emergency. (Title 24, TB-5572)

History: 1. Amendment filed 7-16-76, effective thirtieth day thereafter (Register 76, No. 29).

5581. Fire Control.

Each service station shall be provided with at least one fire extinguisher having a minimum classification of 5B, C located so that an extinguisher will be within 100 feet of each pump, dispenser, underground fill pipe opening, and lubrication or service room.

Article 156. Definitions

6150. Definitions.

(a) Definitions.

(1) **Aqueous Film Forming Foam (AFFF).** A fluorinated surfactant with a foam stabilizer which is diluted with water to act as a temporary barrier to exclude air from mixing with the fuel vapor by developing an aqueous film on the fuel surface of some hydrocarbons which is capable of suppressing the generation of fuel vapors.

(2) **Automatic Fire Detection Device.** A device designed to automatically detect the presence of fire by heat, flame, light, smoke or other products of combustion.

(3) **Carbon Dioxide.** A colorless, odorless, electrically nonconductive inert gas (chemical formula CO₂) that is a medium for extinguishing fires by reducing the concentration of oxygen or fuel vapor in the air to the point where combustion is impossible.

(4) **Dry Chemical.** An extinguishing agent composed of very small particles of chemicals such as, but not limited to, sodium bicarbonate, potassium bicarbonate, urea-based potassium bicarbonate, potassium chloride, or monoammonium phosphate supplemented by special treatment to provide resistance to packing and moisture absorption (caking) as well as to provide proper flow capabilities. Dry chemical does not include dry powders.

(5) **Dry Powder.** A compound used to extinguish or control Class D fires.

(6) **Extinguisher Rating.** The numerical rating given to an extinguisher which indicates the extinguishing potential of the unit based on standardized tests developed by Underwriters Laboratories, Inc.

(7) **Fire Extinguishers, Portable.**

(A) Portable fire extinguishers are classified for use on certain classes of fires and rated for relative extinguishing effectiveness at a temperature of plus 70 degrees Fahrenheit by nationally recognized testing laboratories. This is based upon the classification of fires and the fire-extinguishment potentials as determined by fire tests.

(B) The classification and rating system described in this standard is that used by Underwriters' Laboratories, Inc., and Underwriters' Laboratories of Canada and is based on extinguishing preplanned fires of determined size and description as follows:

1. **Class A Rating—Wood and excelsior.**
2. **Class B Rating—Two-inch depth n-heptane fires in square pans.**
3. **Class C Rating—No fire test. Agent must be a nonconductor of electricity.**
4. **Class D Rating—Special tests on specific combustible metal fires.**

(8) **Fires.**

(A) **Class A.** Fires in ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics.

(B) **Class B.** Fires in flammable or combustible liquids, gases, greases and similar materials and some rubber and plastic materials.

(C) **Class C.** Fires which involve energized electrical equipment where the electrical nonconductivity of the extinguishing media is of importance. (When electrical equipment is de-energized, extinguishers for Class A or B fires may be used safely.)

(D) **Class D.** Fires in combustible metals, such as magnesium, titanium, zirconium, sodium, and potassium.

(9) **Fixed Extinguishing System.** A permanently installed system that either extinguishes or controls a fire at the location of the system.

(10) **Foam.** A stable aggregation of small bubbles which flow freely over a burning liquid surface and form a coherent blanket which seals combustible vapors and thereby extinguishes the fire.

(11) Gaseous Agent. A fire extinguishing agent which is in the gaseous state at normal room temperature and pressure. It has low viscosity, can expand or contract with changes in pressure and temperature, and has the ability to diffuse readily and to distribute itself uniformly throughout an enclosure.

(12) Halon 1211. A colorless, faintly sweet smelling, electrically nonconductive liquefied gas (chemical formula CBrClF_2) which is a medium for extinguishing fires by inhibiting the chemical chain reaction of fuel and oxygen. It is also known as bromochlorodifluoromethane.

(13) Halon 1301. A colorless, odorless, electrically nonconductive gas (chemical formula CBrF_3) which is a medium for extinguishing fires by inhibiting the chemical chain reaction of fuel and oxygen. It is also known as bromotrifluoromethane.

(14) Inspection. A visual check of fire protection systems and equipment to ensure that they are in place, charged, and ready for use in the event of fire.

(15) Local Application Systems. A fixed fire suppression system which has a supply of extinguishing agent, with nozzles arranged to discharge extinguishing agent directly on the burning material to extinguish or control a fire.

(16) Maintenance. The performance of services on fire protection equipment and systems to assure that they will perform as designed in the event of a fire. Maintenance differs from inspection in that maintenance requires the checking of internal fittings, devices and agent supplies.

(17) Multipurpose Dry Chemical. A dry chemical which is approved for use on Class A, Class B and Class C fires.

(18) Pre-Discharge Employee Alarm. An alarm which will sound at a set time prior to actual discharge of an extinguishing system so that employees may evacuate the discharge area prior to system discharge.

(19) Small Hose System. A system of hose ranging in diameter from $\frac{3}{8}$ -inch to $1\frac{1}{2}$ -inch (1.8 cm to 3.8 cm) which is for the use of employees and which provides a means for the control and extinguishment of incipient stage fires.

(20) Sprinkler Alarm. A local alarm unit is an assembly of apparatus approved for the service and so constructed and installed that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler will result in an audible alarm signal on the premises.

(21) Sprinkler System. A sprinkler system, for fire protection purposes, is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The installation includes a water supply, such as a gravity tank, fire pump, reservoir or pressure tank and/or connection by underground piping to a city main.

The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

(22) Standpipes.

(A) Class.

1. Class I. For use by fire departments and those trained in handling heavy fire streams (not less than $2\frac{1}{2}$ -inch hose).

Class I Service shall be capable of furnishing the effective fire streams required during the more advanced stages of fire on the inside of buildings or for exposure fire.

2. Class II. For use primarily by the building occupants until the arrival of the fire department ($1\frac{1}{2}$ -inch hose).

Class II Service shall afford a ready means for the control of incipient fires by the occupants of buildings during working hours, and by watchmen and those present during the night time and holidays.

3. Class III. For use by either fire departments and those trained in handling heavy hose streams or by the building occupants.

Class III Service shall be capable of furnishing the effective fire streams required during the more advanced stages of fire on the inside of buildings as well as providing a ready means for the control of fires by the occupants of the building.

(B) Type. Standpipe systems may be of the following types:

1. Wet standpipe system having supply valve open and water pressure maintained at all times.

2. Standpipe system so arranged through the use of approved devices as to admit water to the system automatically by opening a hose valve.

3. Standpipe system arranged to admit water to the system through manual operation of approved remote control devices located at each hose station.

4. Dry standpipe having no permanent water supply. (Title 24, T8-6150)

(23) Total Flooding System. A fixed suppression system which is arranged to automatically discharge a predetermined concentration of agent into an enclosed space for the purpose of fire extinguishment or control.

NOTE: Authority and reference cited: Section 142.3, Labor Code.

HISTORY:

1. New Group 27 (Articles 156-163, Sections 6150-6183) filed 6-20-75; effective thirtieth day thereafter (Register 75, No. 25).

2. Amendment filed 7-16-76; effective thirtieth day thereafter (Register 76, No. 29).

3. Amendment filed 9-8-81; effective thirtieth day thereafter (Register 81, No. 37).

4. Editorial correction of subsections (a) (12) and (a) (13) filed 6-30-82 (Register 82, No. 27).